

STATEMENT OF CONSIDERATIONS

REQUEST BY THE CARBORUNDUM COMPANY (CARBORUNDUM) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER ITS SUBCONTRACT WITH SOLAR TURBINES INCORPORATED (SOLAR) UNDER DOE CONTRACT NUMBER DE-AC02-92CE40960; W(A)-93-027; CH-0784

The Carborundum Company (Carborundum), has requested a waiver of domestic and foreign patent rights for all subject inventions of its employees under a subcontract it expects to enter under DOE's prime contract with Solar Turbines Incorporated (Solar) for the development of a ceramic stationary gas turbine under contract No. DE-AC02-92CE40960. Carborundum is a wholly owned subsidiary of British Petroleum whose manufacturing and research and development facilities are located primarily in the United States. Accordingly, Carborundum has assured DOE that all records and technical data developed under Carborundum's subcontract, including relevant background data and background patents, will be maintained and be physically available in the United States.

A copy of Carborundum's waiver petition is attached for reference. It is anticipated that the subcontract will extend over three phases having a total cost of approximately \$573,998. Solar has already been granted a waiver to its own employee's inventions under the prime contract which has a total cost of about \$32.7 million. Carborundum has agreed, subject to the grant of its waiver petition, to accept the same terms for its waiver as provided in the waiver already granted to Solar.

The overall objective of the gas turbine program under Solar's prime contract is to improve the performance of stationary gas turbines in cogeneration applications and to lessen environmental emissions through the replacement of metallic components in the turbines with ceramic parts. Carborundum's task under phase I of its subcontract will be to assess preliminary designs provided by Solar for hot face ceramic turbine components and provide fabrication and commercialization plans for the components, as well as to review its existing material database. Although Carborundum's task under Phases II and III of its subcontract is highly dependent on Phase I results, current plans call for final design, material and component testing, manufacture of components, and, finally, engine testing and characterization of ceramic components.

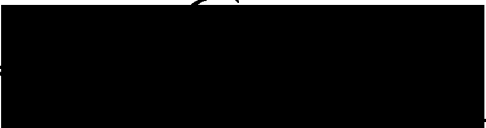
Again referring to its waiver petition, Carborundum states that it has made a substantial investment of financial resources in the research and development relating to various aspects of ceramics manufacturing. Accordingly, Carborundum believes that its technical expertise in the field of ceramics should benefit the work that is to be performed under its subcontract. Relating to ceramic materials in particular, Carborundum states that it is

-2-


a leader/pioneer in design, materials and processes for the production of silicon carbide in various forms to include sintered alpha-type silicon carbide and composites based thereon. In this regard since 1975, Carborundum has invested more than \$50 million on the research and development of processes and products of sintered alpha silicon carbide and expended in 1991 more than \$3.5 million for such research and development. For 1992, Carborundum expects to expend several million dollars for research and development, as well as substantial sums to market its products and capabilities relating to sintered alpha silicon carbide. Over the three phases of this subcontract, Carborundum has agreed to contribute no less than thirty percent (30%), in aggregate for all phases, of the total cost of the subcontract as a condition of this waiver. This is consistent with the waiver granted to Solar based on its commitment to assure thirty percent (30%) cost sharing, in aggregate for all phases, under the prime contract. This private investment clearly demonstrates Carborundum's commitment to the technology and the likelihood of its efforts to commercialize the results of its subcontract.

As in the case of the advance patent waiver to Solar under the prime contract, Carborundum has also agreed that the advance waiver of the Government's rights in inventions will be subject to the usual march-in rights, U.S. manufacturing preference and U.S. Government license comparable to those set out in 35 U.S.C. 202-204. Additionally, products, processes or services used or sold by Carborundum or its affiliates which embody inventions under this waiver must be manufactured, practiced or provided substantially in the United States, and further, any license or other transfer of rights in a subject invention to third parties must be approved by DOE prior to any such transfer. Still further, to insure commercialization of this technology, Carborundum has agreed to license third parties under its background data and background patents on reasonable terms and conditions if it fails to make reasonable efforts to commercialize the technology.

Upon evaluation of the waiver petition and in view of the objectives and considerations set forth in DOE 41 CFR 9-9.109.6 all of which have been considered, it is recommended that the requested waiver be granted.


Thomas G. Anderson
Assistant Chief Counsel
Office of Intellectual
Property Law Division

Date: 3/22/94

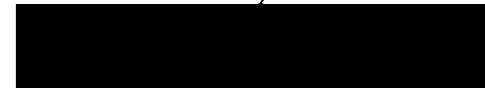

Daniel D. Park
Patent Attorney
Office of Intellectual
Property Law Division

Date: 3/22/94

-3-

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered, or in the event that Carborundum's obligation for cost sharing is less than thirty percent (30%), in aggregate for all phases, of the total cost of the subcontract.

CONCURRENCE:



Kurt D. Sisson
Acting Director, EE-221
Office of the Deputy Assistant Secretary
for Industrial Technologies

Date: 5/12/94

APPROVAL:

Richard E. Constant
Assistant General Counsel for
Technology Transfer, HQ
and Intellectual Property

Date: _____